**\*\* Send the .CPP files to** [balqrashi@ksu.edu.sa](mailto:balqrashi@ksu.edu.sa)

1. **Write A program containing the following**
2. Define a base class called **Person**, which has the following members:

**Private**

Name;

**Protected**

ssn **;**

**Public**

Age ;

set\_Personal\_info() // set for the above info

print() // prints all the info for the class.

// constructor print a message "person constructor"

1. Now define a class called **Student**, which is **privately** **derived** from **Person**. It should have the following public members:

**Protected**

GPA

**Public**

set\_Student\_info() // a function that sets for student info

print() // print the stored information

// constructor print a message "student constructor"

// destructor do nothing

Write a short main() program which instantiates as an object of the class Student **yourself** (the object name will be your name ).

Supply all the information through functions and print the data out .

1. **Write A program containing the following**

class Date

{

protected:

int day;

int month;

int year;

public:

Date(){day=month=year=0;} //constructor

~Date(){cout<<"object destroyed date"<<endl;} //destructor

void display()

{cout<<"the date :" <<month<<"/"<<day<<"/"<<year<<endl;}

void set(int d, int m, int y){day=d;month=m;year=y;}

};

class Time

{

protected:

int hour;

int minute;

int second;

public:

Time(){hour=minute=second=0;} //constructor

~Time(){cout<<"object destroyed Time "<<endl;} //destructor

void display()

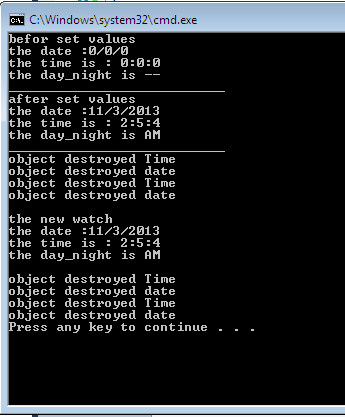
// displays the time on the screen

{cout <<"the time is : " << hour<<":"<<minute<<":"<<second<<endl;}

void set(int h, int m,int s)

{hour=h; minute=m; second=s ;}

};

1. Create a class that inherit **publicly** from both **Date** and **Time** Class and named as **DateAndTime**
2. Define the **DateAndTime** class member as follows

String day\_night; //for am or pm

public:

void display(); // prints date and time

1. In main

Define an instance **object** of class DateAndTime called **Watch**.

Display the content of this object

Then allows the attributer in the object **Watch** to take value through the set () with the current date and time .and display the results.